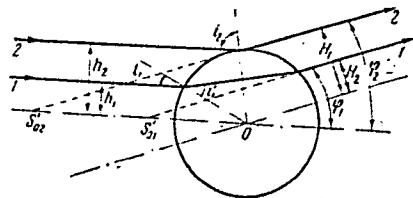


86756
S/120/60/000/006/032/045
E032/E314

Evaluation of the Image in the Photography of Bubble-chamber
tracks



X

There are 2 figures and 1 Soviet reference.

ASSOCIATIONS: Fizicheskiy institut AN SSSR (Physics Institute of the AS USSR) Moskovskiy fiziko-tehnicheskiy institut (Moscow Physico-technical Institute)

Card 5/6

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929910016-4

86756

S/120/60/000/006/032/045
E032/E514

Formation of the Image in the Photography of Bubble-chamber
Tracks

SUBMITTED: September 29, 1959

Card 6/6

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929910016-4"

86757

21.5200 (1033, 1144, 1191)

S/120/60/000/006/033/045
E032/E314

AUTHORS: Aleksandrov, Yu.A., Delone, N.B., Likhachev, V.M.
and Gorbunkov, V.M.

TITLE: On the Rate of Growth and the Rate of Upward Drift
of Bubbles in a Propane Chamber

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No. 6,
p. 120

TEXT: It was shown in previous papers by the present
authors (Refs. 1, 2) that when particle tracks in bubble
chambers are photographed, the object which is photographed
is the virtual image of the source in the bubbles. The
experiment described in Ref. 2, in which two sources of
illumination were employed will also provide information about
the rate of growth and the rate of upward drift of bubbles.
The experiments reported in the present note were similar to
those described in Ref. 2 (see the previous abstract of this
issue), except for the sources of illumination. Two pulsed
lamps were used to illuminate the two sources using a delay
of 7, 14, 22 and 30 μ s, respectively. A photograph of two
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S/120/60/000/006/033/045
E032/E314

On the Rate of Growth and the Rate of Upward Drift of Bubbles
in a Propane Chamber

successive flashes of the lamps was obtained on each plate. During the time between the flashes each bubble increases in size and drifts upwards. The growth of the bubble leads to an increase in the distance between the dots in the horizontal direction, while the upward drift leads to a displacement of the dots in the vertical direction. A typical photograph is shown in Fig. 1. The radius of the bubbles was measured by the method described in Ref. 2. In the four series of measurements which were carried out the initial radius was between 0.1 and 0.2 mm and the final radius between 0.2 and 0.36 mm. According to Seitz (Ref. 3), the radius r in mm is related to the time t in sec by the formula $r = Ct^{1/2}$. The value obtained for the constant is : $C_{\text{exp}} = (5.8^{+2.6}_{-1.2})10^{-2}$.

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S/120/60/000/006/033/045
E032/E314

On the Rate of Growth and the Rate of Upward Drift of Bubbles
in a Propane Chamber

The errors indicated represent maximum deviations. According to Plesset and Zwick (Ref. 4), the constant C for propane has the theoretical value of 0.17. The rate of upward drift for the above range of bubble radii was found to be 0.036 and 0.117 mm/sec. It is clear that the rate of upward drift is appreciably greater than the rate of growth of the bubbles, i.e. during its growth each bubble is displaced through the surrounding medium. This fact was not taken into account by Seitz (Ref. 3). The heat exchange between the bubble of liquid, which determines its rate of growth, will be greater in the case of a moving bubble. This will lead, in the case of the present experiment, to a discrepancy between experiment and theory, as indicated above. Further work is being carried out in this connection.

X

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86757

S/120/60/000/006/033/045
E032/E314

On the Rate of Growth and the Rate of Upward Drift of Bubbles
in a Propane Chamber

There are 1 figure and 4 references: 2 Soviet and 2 English.

ASSOCIATIONS: Fizicheskiy institut AN SSSR
(Physics Institute of the AS USSR)
Moskovskiy fiziko-tekhnicheskiy institut
(Moscow Physico-technical Institute)

SUBMITTED: September 29, 1959

Card 4/4

L 64775-65 EEP(k)-2/EHA(h)/EHA(k)/EAT(l)/EAT(m)/FBD/EWF(i)/EWP(b)/T/EHA(m)-2/EWP(k)/
ACCESSION NR: AP5021736 EWF(e) SOTB/IJP(z) WC/WH UR/0386/65/002/002/0095/0097
AUTHOR: Bedilov, M. R.; Likhachev, V. M.; Mikhaylov, G. V.; Rabinovich, M. S. 44-58

TITLE: Use of the pinch-effect for optical laser pumping 25-41

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.
Prilozheniya, v. 2, no. 2, 1965, 95-97, and insert attached to p. 97

TOPIC TAGS: glass laser, neodymium laser, ruby laser, laser pumping, optical
pumping, pinch pumping, pinch effect

ABSTRACT: Experimental use of the pinch-effect in gas for the optical pumping of
 Nd^{3+} glass and ruby lasers is reported at currents up to 300 k-a with a rise rate of
 3×10^{11} amp/sec and discharge periods of approximately 4 usec. The energy source
was a specially constructed low-induction 30-uf, 9-kv capacitor bank. The experimental
pump light efficiency in the 2000-6000 Å region using krypton gas at a 20 k-a/cm²
current density was ~12%, and for a 1.2-kj input energy the output energy was ~150 j,
of which 50-70 j was in the 4000-6000 Å region, and 80-100 j in the 2000-4000 Å
region. The pump light spectrum was continuous and similar to the emission spectrum
of a black body at 35,000K. The neodymium glass rod with silver-coated ends (coef-
ficient of reflection 0.92 and 1.0) was 53 mm long and 7.6 mm in diameter. The

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ACCESSION NR: AP5021736

stimulated emission, which occurred at 1.06μ after $\sim 1.5 \mu\text{sec}$ pumping, was observed for 8 μsec by an FEU-22 photomultiplier equipped with suitable filters. To achieve laser action in the available ruby crystals for the given pinch power, a combined pumping system was used. By placing a ruby crystal in the common focus of a double-branch elliptical reflector, and a quartz discharge chamber (100 mm long and ~ 30 mm in diameter) and an IFN-800 xenon lamp at the two other foci, the stimulated emission was observed. Under these pumping conditions the pulsed emission frequency increased approximately tenfold, with a 2-2.5-fold increase in the peak pulse amplitude. Orig. art. has: 2 figures.

3

[YK]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR
(Physics Institute, Academy of Sciences, SSSR)

SUBMITTED: 02Jun65

ENCL: 00

SUB CODE: EC

NO REF Sov: 001

OTHER: 001

ATD PRESS: 4679

Card 2/2

L 17535-66 EWT(d)/EWT(1)/ETC(f)/EPF(n)-2/EWG(m) IJP(c) WW/AT
ACC NR: AP6006794 SOURCE CODE: UR/0386/66/003/001/0012/0014

AUTHOR: Kulagin, S. G.; Likhachev, V. M.; Markuzon, Ye. V.; Rabinovich, M. S.; Sutovskiy, V. M.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskiy
institut Akademii nauk SSSR)

TITLE: States with inverse population in a pinched discharge

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.
Prilozheniye, v. 3, no. 1, 1966, 12-14

TOPIC TAGS: discharge plasma, plasma pinch, stimulated emission, laser R and D, gas
laser, argon

ABSTRACT: The authors show that states with a negative temperature exist in a
pinched discharge plasma. This phenomenon is demonstrated by a pulse of stimulated
emission which coincides with the moment of pile-up. An installation for generating
currents up to 15 KA with a discharge period of 2-5 usec was used in the experi-
ments. The quartz discharge tube was 100 cm long and 2.5 cm in diameter. Annular
2-1.94.5

Card 1/2

L 17535-66

ACC NR: AP6006794

3

copper electrodes were used with an internal diameter of 2.5 cm. The optical resonator was made up of two spherical dielectric mirrors. The coefficients of reflection for the mirrors in the emission zone were 90 and 45%. Condensers with a capacitance of 0.1, 0.4, and 2.5 μ f and a voltage of 20-30 kv were used as the power source. The working gas was spectrally pure argon at a pressure of 10^{-2} mm Hg. A curve is given showing the intensity of stimulated emission as a function of pressure. Emission is observed on the 4765 Å line of singly ionized argon at pressures from $9 \cdot 10^{-3}$ - $3 \cdot 10^{-2}$ mm Hg. This is also the best pressure range for generation of a pinch discharge. Experiments were done at a pressure of $1.25 \cdot 10^{-2}$ mm Hg which corresponds to the maximum intensity. The photoelectric method was used for recording the emission pulse. Emission lags 0.2 usec behind the current and lasts for 0.2 usec. Emission power at the maximum is 20-25 kw. Calculations show that the emission pulse corresponds approximately with the time of discharge compression. "The authors thank corresponding member AN SSSR A. M. Prokhorov for interest in the work and useful consultation and also laboratory workers M. R. Bedilov and Yu. K. Dmitriyev for assistance in carrying out the experiment." Orig. art. has: 3 figures. [14]

SUB CODE: 20/ SUBM DATE: 11Nov65/ ATD PRESS: L211

Card 2/2

L 21717-66 FSS-2/EWT(1)/ETC(f)/EPF(n)-2/EWG(m) IJP(c) AT/WR

ACC NR: APG004878

SOURCE CODE: UR/0057/66/036/001/0053/0057

AUTHOR: Il'in,S.D.; Likhachev,V.M.; Petrushev,S.S.;Chernetskiy,A.V.

ORG: none

TITLE: Location of moving plasma bursts from a coaxial injector

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 1, 1966, 53-57

TOPIC TAGS: plasma diagnostics, plasma velocity, Doppler shift, microwave, hydrogen plasma

ABSTRACT: The authors have employed a microwave Doppler shift radar technique to measure the velocities of hydrogen plasma bursts injected at velocities from 3.6×10^6 to 1.5×10^7 cm/sec into a 10 cm diameter 130 cm long glass drift tube by a conical plasma gun powered with a 6 kV 20 μ F capacitor bank. The measurements were undertaken to explore the possibilities of the Doppler shift technique. For control purposes the velocities of the plasma bursts were also measured with two microwave transmission cutoff setups located at different positions along the drift tube. Microwaves in the 3 cm range were employed for both the cutoff and the Doppler shift measurements. In the Doppler shift measurements a single dielectric antenna, coupled with a 10 db directional coupler with a directionality of 25 db, was employed for both radiation and reception. In order to determine the influence of the fluctuations of the reflecting surface of the plasma burst on the frequency of the reflected signal, Doppler shift

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UDC: 533.2

L 21717-66

ACC NR: AP6004878

3

measurements were made at several angles (up to 40°) to the line of flight. Good agreement was obtained among all the velocity measurements, and it is concluded that the Doppler shift technique can be used to measure the velocities of plasma bursts. With further development the method will provide other data, including the time variation of the velocity, the trajectory, the direction of flight, and information concerning the internal structure of the plasma burst. The authors thank Professor M.S. Rabinovich and the staff of the laboratory for valuable discussions, and A.N.Pantyushin and G.I.Ochimnikov for assistance with the experiment. Orig. art. has: 1 formula, 5 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 25Jan65/ ORIG REF: 002 OTH REF: 000

Card 2/2 adda

ACC NR: AT6033039

SOURCE CODE: UR/2504/66/032/000/0097/0106

AUTHOR: Bedilov, M. R.; Likhachev, V. M.; Mikhaylov, G. V.; Rabinovich, M. S.

ORG: none

TITLE: Investigation of the radiation of a straight self-compressed discharge (pinch) in the visible and ultraviolet regions. 1. Fast discharge at small current densities

SOURCE: AN SSSR. Fizicheskiy institut. Trudy, v. 32, 1966. · Fizika plazmy (Plasma physics), 97-106

TOPIC TAGS: plasma pinch, plasma radiation, UV spectrum, plasma discharge

ABSTRACT: The experimental apparatus is shown in Fig. 1. The distance between electrodes was 16 cm and the diameter of the electrodes was 20 cm. The source of energy was a battery of condensers with a capacitance of 20 microfarads. Commutation of the current was accomplished with a vacuum discharger with igniting electrodes. The parasitic inductance of the loop was approximately 6 cm. To the electrodes of the chamber there was applied a current of 9 kilowatts, which corresponded to an energy supply of about 1 kilojoule. The apparatus made it possible to generate current pulses up to 300 kiloamps at a discharge time of 4 microseconds. Discharge investigations were carried out for He, Ne, Ar, Kr, Xe, H₂, and air. The discharge

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ACC NR: AT6033039

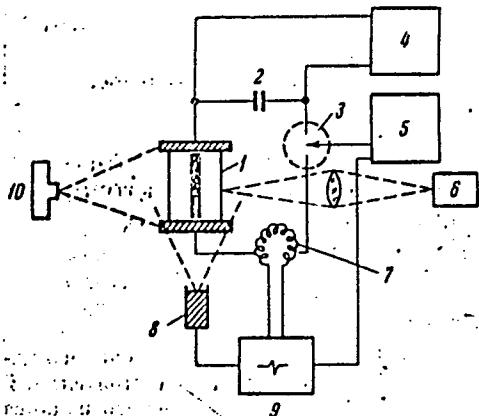


Fig. 1. Scheme of experimental unit.

1—discharge chamber; 2—battery of condensers; 3—vacuum discharger;
4—feeding unit; 5—control unit; 6—ISP-30 spectrograph; 7—Rogowski
loop; 8—FEU-14B photomultiplier; 9—OK-17M oscilloscope; 10—photochamber.

for each gas was studied at pressures from 10^{-1} to 10 torr. On the basis of the experimental data calculations were made of the distribution of the radiation over the chamber, the time characteristics of the discharge, the spectral composition of the

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ACC NR: AT6033039

radiation yield. A large table shows the energy characteristics of the radiation of a pinched plasma for the six gases studied. "In conclusion the authors express their thanks to their laboratory co-workers A. N. Pantyushin and L. N. Spiridonova for help in carrying out the experiments." Orig. art. has: 6 figures and 1 table.

SUB CODE: 20/ SURM DATE: none/ ORIG REF: 002/ OTH REF: 006

Card 3/3

ACC NR: AT6033040

SOURCE CODE: UR/2504/66/032/000/0107/0111

AUTHOR: Likhachev, V. M.; Mikhaylov, G. V.; Rabinovich, M. S.

ORG: none

TITLE: Investigation of the radiation of a straight self-compressed discharge (pinch) in the visible and ultraviolet regions. 2. Fast discharge at large current densities

SOURCE: AN SSSR. Fizicheskiy institut. Trudy, v. 32, 1966. Fizika plazmy (Plasma physics), 107-111

TOPIC TAGS: plasma pinch, plasma radiation, UV spectrum, plasma discharge

ABSTRACT: The basic experiments on the dependence of the radiation of the discharge on the voltage supplied (energy) were carried out in a chamber with a diameter of 50 mm and a length of 100 mm (the walls of the chamber were made of quartz and the electrodes of copper). The chamber was filled successively with hydrogen, helium, and krypton at a pressure of 1 torr. For each gas, photos were taken of the spectrum at battery energies of: 135 joules (3 kilowatts), 540 joules (6 kilowatts), and 1200 joules (9 kilowatts). The results are shown in a series of figures. In general the results point to the possibility of using a self-compressed discharge as a pulse source of radiation of small duration with a continuous emission spectrum. In the ultraviolet region, this source yields stronger radiation than a xenon lamp. "In conclusion, the

Card 1/2

ACC NR: AT6033040

authors thank their coworkers in the laboratory, A. N. Pantyushin and A. V. Spiridonova for their help in preparing and carrying out the experiment." Orig. art. has: 4 figures.

SUB CODE: 20/ SUEM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 2/2

L 07825-67 EWT(1)/EWT(m)/EFC(k)-2/EWP(c)/EWP(t)/ETI/EWP(k) IJP(c) DS/WC/JD
ACC NR: AP6034216 SOURCE CODE: UR/0368/66/005/004/0534/0535

AUTHOR: Kulagin, S. G.; Likhachev, V. M.; Rabinovich, M. S.; Sutovskiy, V. M.

ORG: none

TITLE: Pulsed argon laser at high-density currents and low pressures

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 4, 1966, 534-535

TOPIC TAGS: gas laser, argon laser, high intensity laser, pulsed laser

ABSTRACT: Oscillation of a pulsed Ar⁺ laser at heavy currents (up to ~15—20 kamp/cm²) and low pressures (10^{-1} — 6×10^{-3} mm Hg) was investigated experimentally. The heavy current pulsed discharge was achieved in quartz tubes 1000 mm long and 10 mm in (internal) diameter. The tubular electrodes, made of tantalum, were 50 mm long and 10 mm in diameter. The output of the gas-discharge chamber was directed through quartz plane-parallel plates situated 150 mm from the electrodes at Brewster angles. The cavity consisted of two spherical mirrors with a 300-mm radius of curvature, placed 1500 mm from each other. One mirror was silver coated and the other dielectric coated (reflectivities were 90 and 30%, respectively). The energy was supplied from condensers with capacities of 0.01, 0.1, 0.4, and 2.6 μF at 10—25 kv. The equipment was capable of generating 1—15 kamp pulses for 1—5-μsec discharge periods. The output radiation was recorded photoelectrically. The experiments were carried out in spectrally pure argon in the pressure range from 10^{-1} to 6×10^{-3} mm Hg. The

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ACC NR: AP6034216

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oscillation maximum corresponds to a very narrow range of pressures from 2×10^{-2} to 8×10^{-3} mm Hg and the output intensity increases with the discharge current (20–25 kw at ~15 kamp). The duration of oscillation decreases with decreasing pressure and an increasing rate of current buildup. The laser spot structure was highly inhomogeneous with the brightness maximum at the periphery. A more uniform distribution of the spot brightness was achieved with increased discharge currents. Under experimental conditions, discharge collapse (pinch effect) in the direction of the axis presumably enhanced oscillation conditions. However, due to the small diameter of the discharge tube, this effect could not be recorded. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 16Sep65/ ORIG REF: 005/ ATD PRESS: .5101

Card 2/2 bc

ACC NR: AP7004942

SOURCE CODE: UR/0386/67/005/002/0055/0057

AUTHOR: Likhachev, V. M.; Rabinovich, M. S.; Sutovskiy, V. M.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy
institut Akademii nauk SSSR)TITLE: Feasibility of investigating a pinch discharge by using its intrinsic
stimulated emissionSOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.
Prilozheniya, v. 5, no. 2, 1967, 55-57TOPIC TAGS: stimulated emission, plasma diagnostics, discharge plasma, plasma pinch,
laser effect, high temperature plasma, plasma dischargeABSTRACT: This is a continuation of earlier work (Pis'ma ZhETF v. 3, 12, 1966),
where the existence of negative-temperature states in a high-temperature plasma of a
strong-current pinch discharge was demonstrated. In this article the authors report
the use of this phenomenon to investigate the cumulation of a pinch discharge. This
was done by measuring (with a Rogowski loop) the time correlation between the
stimulated-emission pulse and the current pulse at the instant of discharge cumula-
tion. The discharge current reached 20 kiloamp at 2 μ sec duration, and the current
density at the instant of cumulation reached 50 - 75 ka/cm². The stimulated-emission
pulse was observed by mounting confocal dielectric-coated mirrors at the ends of the
discharge tube. The working gas was pure argon. The measurements show that the

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UDC: none

ACC NR: AP7004942

maximum of the generation pulse coincides with the instant of current cumulation. Furthermore, generation occurs not only during the instant of maximum pinch contraction, but also as the plasma front moves during the stage immediately preceding the discharge cumulation. However, the emission maximum coincides with the current maximum. Generation takes place only at sufficiently large currents (large discharge capacitor, 0.4 μ F, charged to high voltages up to 45 kv). The characteristics of the stimulated emission depend strongly on the discharge conditions, so that an investigation of the laser action can serve as an additional means of plasma diagnostics. It is further hoped that at sufficiently high generation power the emission can also be used to determine the plasma parameters directly at the instant of generation by incoherent ion or electron scattering, by linear plasma interaction, and by similar effects. Orig. art. has: 2 figures.

[02]

SUB CODE: 20/ SUBM DATE: 25Oct66/ ORIG REF: 001/ ATD PRESS? 5114

Card 2/2

SOKHRANSKIY, S.T., inzh.; LIKHACHEV, V.P., inzh.; KHROMCHENKO, G.Ye.,
inzh., nauchnyy red.; AZRILYANT, Ya.M., red. izd-va; OSENKO, L.M.,
tekhn. red.

[Installation of electric cables] Montazh kabel'nykh linii. Mo-
skva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam,
1961. 325 p.
(MIRA 14:8)

I. Russia(1917- R.S.F.S.R.) Glavnaya upravleniya po proizvodstvu
elektromontazhnykh rabot.

(Electric cables)

Litsnachet v. 1

AGAPOV, D.S.; ARTIBILOV, B.M.; VIKTOROV, A.M.; GINTS, A.N.; GOR'KOV, A.V.;
GUSYATINSKIY, M.A.; KARPOV, A.S.; KOLOT, I.I.; KOMAREVSKIY, V.T.;
KORIAGIN, A.I.; KRIVSKIY, M.H.; KRAYNOV, A.G.; MESTEROVA, I.B.;
OBES, I.S., kandidat tekhnicheskikh nauk; SOSHOVIKOV, K.S.; SUKHOP-
SKIY, S.F.; CHLENOV, G.O.; YUSOV, S.K.; ZHUK, S.Ya., akademik, glavnnyy
redaktor; KOSTROV, I.N., redaktor; BARONENKOV, A.V., professor,
doktor tekhnicheskikh nauk, redaktor; KIRZHNER, D.M., professor,
doktor tekhnicheskikh nauk, redaktor; SHESHKO, Ye.P., professor, doktor
tekhnicheskikh nauk, redaktor; AVERIN, N.D., inzhener, redaktor
[deceased]; GOR'KOV, A.V., inzhener, redaktor; KOMAREVSKIY, V.T.,
inzhener, redaktor; ROGOVSKIY, L.V., inzhener, redaktor; SHAPOVALOV,
T.I., inzhener, redaktor; RUSSO, G.A., kandidat tekhnicheskikh nauk,
redaktor; FILIMONOV, N.A., inzhener, redaktor; VOLKOV, L.N., inzhener,
redaktor; GRISHIN, M.M., professor, doktor tekhnicheskikh nauk, redak-
tor; ZHURIN, V.D., professor, doktor tekhnicheskikh nauk, redaktor;
LIKHACHEV, V.P., inzhener, redaktor; MEDVEDEV, V.M., kandidat tekhnici-
cheskikh nauk, redaktor; MIKHAYLOV, A.V., kandidat tekhnicheskikh nauk,
redaktor; PETROV, G.D., inzhener, redaktor; RAZIN, N.V., redaktor; . . ,
SOBOLEV, V.P., inzhener, redaktor; FRIINGER, B.P., inzhener, redaktor;
TSYPLAKOV, V.D., inzhener, redaktor; ISAYEV, N.V., redaktor; TISTROVA,
O.N., redaktor; SKVORTSOV, I.M., tekhnicheskiy redaktor

[The Volga-Don Canal; technical report on the construction of the
Volga-Don Canal, the Tsimlyanskaya hydro development and irrigation
works (1949-1952); in five volumes] Volgo-Don; tekhnicheskii otchet
(continued on next card)

AGAPOV, D.S. --- (continued) Card 2.

o stroitel'stve Volgo-Donskogo sudokhodnogo kanala imeni V.I.Lenina.
TSimlianskogo gidrouzla i orositel'nykh sooruzhenii (1949-1952) v
piati tomakh. Glav.red. S.IA. Zhuk. Moskva, Gos.energ. izd-vo.
Vol.5. [Quarry management] Kar'ernoe khoziaistvo. Red.toma I.N.
Kostrov. 1956. 172 p. (MLRA 10:4)

1. Russia (1923- U.S.S.R.) Ministerstvo elektrostantsii. Byuro
tekhnicheskogo otcheta o stroitel'stve Volgo-Dona. 2. Deystvitel'nyy
cheln Akademii stroitel'stva, i arkhitektury SSSR (for Razin)
(Quarries and quarrying)

1. LIMNACHEV, V. S.
2. USSR (600)
4. Agricultural Machinery - Testing
7. Work of state machine-testing stations, Sel'khozmashina, No. 10, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

BUDKO, A. I.; VEDENYAPIN, G. V.; SAFRAZBEKYAN, O. A.; LIKHACHEV, V. S.

Agricultural Machinery

Considering G. B. Klimov's article "Evaluation of the work capacity of agricultural machinery by usage coefficients." Sel'khozmashina No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

LIKACHEV, V.S., kandidat tekhnicheskikh nauk.

Calculating the traction characteristics of a tractor. avt.trakt.prom.
no.8:15-17 Ag '53. (MLRA 6:3)
(Tractors)

LIKACHEV, V.S., kandidat tekhnicheskikh nauk; YAKOBI, M.A., kandidat tekhnicheskikh nauk, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor; TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[The testing of tractors] Ispytaniia traktorov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1955. 318 p. (MIRA 8:4)
(Tractors--Testing)

LIKHACHEV, V.S., kandidat tekhnicheskikh nauk.

Efficiency of tractor units. Sel'khozmashina no.11:23-25 N '55.
(Agricultural machinery) (MLRA 9:1)

LIKACHEV, V.S., kandidat tekhnicheskikh nauk.

Fuel feed corrector for internal combustion tractor engines. Avt.
i trakt. prom. no.9:17-19 S '56. (MIRA 9:11)

1. Kubanskiy sel'skokhozyaystvennyy institut.
(Tractors--Engines)

LIKACHEV, V.S., kand.tekhn.nauk

Comments on the state standards concerning the testing of
tractors. Trakt.i sel'khozmash. no.1:16-17 Je '60.
(MIRA 13:4)

1. Kubanskiy sel'khozinstitut.
(Tractors--Testing)

LIKACHEV, V.S., kand. tekhn. nauk; VEDENYAPIN, G.V., doktor
tekhn. nauk, retsenzent; FAL'KO, O.S., inzh., red.;
EL'KIND, V.D., tekhn. red.

[Testing tractors] Ispytaniia traktorov. Izd.2., perer.
Moskva, Mashgiz, 1963. 278 p. (MIRA 17:2)

1. LIKHACHEV, V. V.
2. USSR (600)
4. Horse Racing—Novosibirsk Province
7. Novosibirsk Province race track. Konevodstvo 23 no. 5 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

LIKACHEV, Ye., inzh.

Some unsolved problems in improving the design, operation, and
repair of caterpillar cranes and cranes with pneumatic tires.
Na stroy. Mosk. 2 no.7:10-11 Jl '59. (MIRA 12:10)

1.Upravleniye mekhanizatsii No.6 tresta Mosstroymekhanizatsiya No.1.
(Cranes, derricks, etc.)

LIKACHEV, Ye.N.; ZAYTSEV, Kh.P.; MOSKEVICH, I.Ye.

Improving methods of determining founding costs. Lit.proizv.
no.2:9-12 F '62. (MIRA 15:2)
(Founding--Costs)

MEDVEDEV, I.A.; GLIKMAN, E.S.; BEL'GOL'SKIY, B.P.; VOLKOVA, Ye.N.;
STARODUBSKIY, D.F.; LIKHACHEV, Ye.N.

Methods of determining the effect of the volume of output on the
magnitude of general plant expenditures and metallurgical plant
production costs. Izv. vys. ucheb. zav.; chern. met. 6 no.6:
209-213 '63. (MIRA 16:8)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Iron industry) (Steel industry)

NOVAKOVSKIY, V. M.; LIKHACHEV, Yu.

"An application of radio-electrochemical methods to the investigations of passivity."

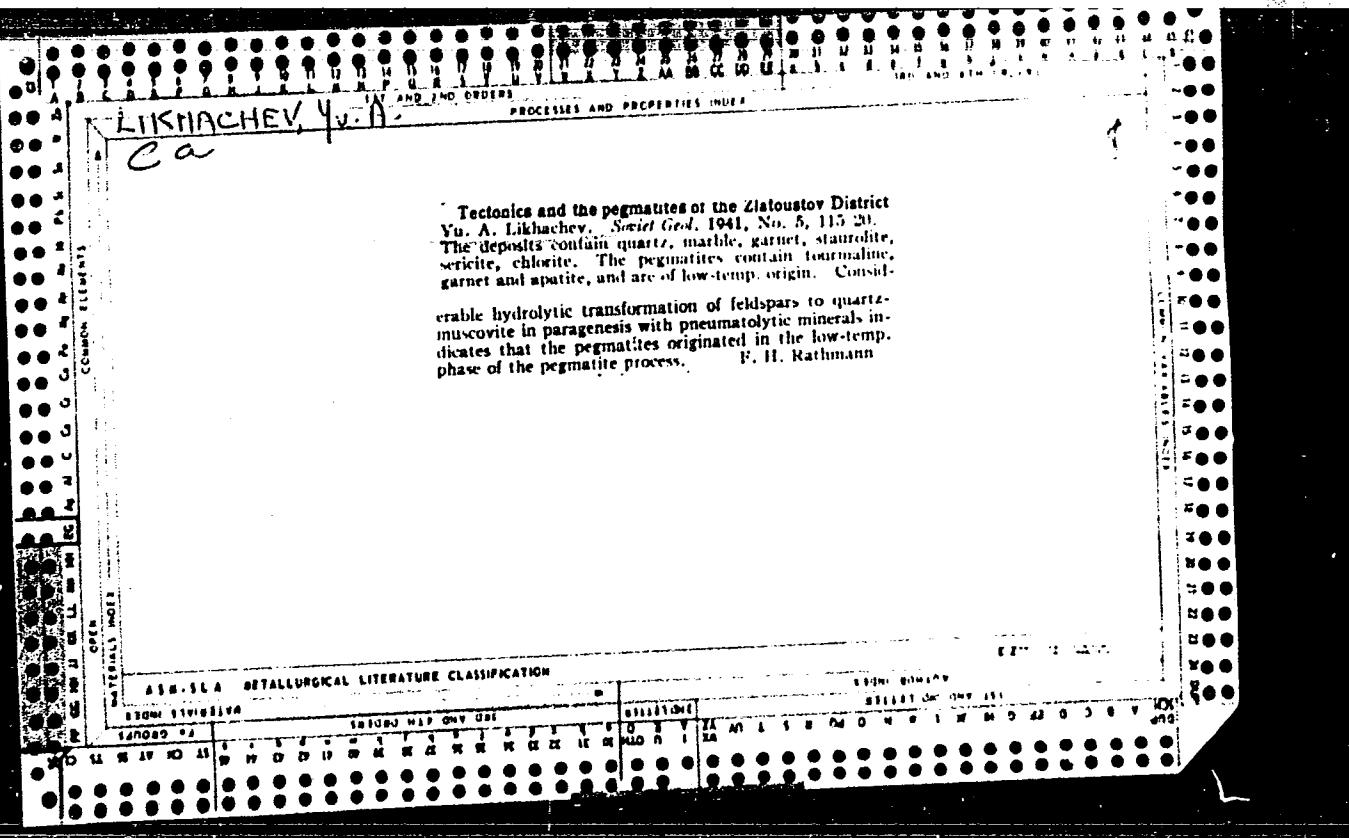
report presented at 15th Mtg, Intl Comm of electrochemical Thermodynamics & Kinetics, London & Cambridge, UK, 21-26 Sep 1964.

Karpov Physico-Chemical Inst, Moscow.

Likhachev, Yu A.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929910016-4"



LIKACHEV, Yu.A.

Stratigraphy of upper Paleozoic volcanicogenic deposits of eastern
Kara-Mazar. Mat. NSGGI no.10:38-50 '56. (MIRA 10:1)
(Kara-Mazar Range--Geology, Stratigraphic)

LIKACHEV, Yu.A.

History of the development of the structure of the eastern Karamazor
and general features of the location of hydrothermal mineralization.
Izv. Otd. est. nauk AN Tadzh. SSR no.1:71-78 '59.
(MIRA 13:3)

1. Vsesoyuznyy geologicheskiy nauchno-issledovatel'skiy institut.
(Karamazor Mountains—Mineralogy)

LIKACHEV, Yu.A.; VLADIMIRSKIY, V.S.; MALOVA, E.V.; SHUL'TS, S.S.

Basic characteristics of the stratigraphy of the Paleozoic in the
central Kyzyl Kum. Trudy VSEGEI 46:22-35 '61. (MIRA 14:11)
(Kyzyl Kum--Geology, Stratigraphic)

LIKACHEV, Yu.A.; VLADIMIRSKIY, V.S.

Characteristics of the development of the folded structure in the
Paleozoic basement of the Kyzyl Kum. Trudy VSEGEI 46:36-45 '61.
(MIRA 14:11)

(Kyzyl Kum--Folds (Geology))

LIKHACHEV, Yu.A.; VLADIMIRSKIY, V.S.; MALOVA, E.V.; SHUL'TS (mladashiy), S.S.;
MAKAROVA, Z.A.; SINCHUGOVA, T.A.; CHUVENKO, P.P., red.; FEDOTOVA, M.I.,
vedushchiy red.; DEM'YANENKO, V.I., tekhn.red.

[Paleozoic tectonics of the Kyzyl Kum basement] Tektonika
paleozoiskogo fundamenta Kyzylkumov. Leningrad, Gostoptekhizdat,
1963. 117 p. (Leningrad, Vsesoiuznyi geologicheskii institut.
Trudy, vol. 105. Problema neftegazonosnosti Srednei Azii, no.15).
(MIRA 17:3)

NOVAKOVSKIY, V.M.; LIKHACHEV, Yu.A.

New data on the passivity mechanism. Zashch.met. 1 no.1:13-19 Ja-F
'65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni
Karpova, Moskva.

ACC NR: AP7000671

(N)

SOURCE CODE: UR/0375/66/000/012/0073/0075

AUTHOR: Likhachev, Yu. A. (Engineer; Captain lieutenant); Nikolayev, E. Ye. (Engineer; Captain Lieutenant)

ORG: none

TITLE: Corrosion protection of diesel submarine engines

SOURCE: Morskoy sbornik, no. 12, 1966, 73-75

TOPIC TAGS: ~~corrosion~~, gas corrosion, sea water corrosion, corrosion protection, diesel engine

ABSTRACT: The corrosion of diesel submarine engines, the effect of corrosion on various engine parts, the reasons of its appearance, its dependance on the operating life, and means of protecting against corrosion are discussed. Experience gained over a long operating time shows that corrosion damage first appears on air-flap shutter housings, housings and cooling jackets of external gas-flap shutters, and underwater parts of exhaust pipes. Red-lead coatings do not provide sufficient corrosion protection for diesel engine installations in submarines, but coatings based on chlorinated polyvinyl-chloride and epoxy resins, bakelite lac, and special paste-like mixtures of passivating properties were found to significantly prolong the service life. Removable metal protectors are recommended for installation inside of cooling systems and also directly on the housings of flap shutters and exhausts. Such

Card 1/2

UDC: none

ACC NR: AP7000671

a protector made of ML-4 alloy has been proved to double the service life of an intermediate exhaust knee. Somewhat thicker walls for cooling jackets, thicker bottoms for flap shutters, and on welds for both sides of pipe-flange joints are recommended. [CE]

SUB CODE: 13, 11/ SUBM DATE: none

Card 2/2

LIKACHEV, Yu. I.

"The Character of the Destruction of Plastic Metals Under Conditions of a Tensile Stress Concentration." Cand Tech Sci, Leningrad Polytechnic Inst imeni M. I. Kalinin, Min Higher Education USSR, Leningrad, 1954. (KL, No 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

Device for Measuring Contracting in the Notch² № 1
Udicheev, (Zavodskie Laboratories, 1953) El. 1953
124.3. (In Russian). An indicating device is made described
with which the decrease in the diameter at the notch of a
peripherally-notched cylindrical tensile test piece can be
measured without removing it from the jaws.

82
Kuibyshev Industrial Inst.

LYKHACHEV, YU I.
LYKHACHEV, YU I.

735. Grabin, A. N., and Likhachev, Yu. I. Analysis of the stressed state arising in the stage of large plastic deformations in stretching cylindrical specimens with ring-shaped groove (in Russian), *Zh. tekh. fiz.* 25, 512-528, 1953.

*Wekh
plot*

Analysis is given of the problem of the progressive quasistatic extension under axial force of a circular cylinder with a transverse groove cut along its surface. The problem is therefore one of rotational symmetry, and all quantities are functions of two space coordinates and a time coordinate specifying the progress of the deformation. The method is based upon finite-strain theory of plasticity. At the outset, a power series development in an axial coordinate is assumed for the components of displacement, the coefficients in these series being unknown functions of a radial coordinate. The method proceeds through various approximations. In particular, approximations occur in connection with the above series and with the satisfaction of the boundary conditions at the progressively deforming groove. No application is made to any specific problem.

Reviewer's note: This problem is of considerable technological importance. Unfortunately, an analysis based upon an incremental theory of plasticity would be prohibitively difficult at the present time. The circumstances in which results predicted by the present analysis will be sufficiently reliable for design use are to be determined only through direct comparison with experimental data.

Courtesy of Mathematical Reviews H. G. Hopkins, England

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929910016-4

LIKACHEV, Yu.I.

Characteristics of plastic fracture of metals subjected to concentrated tensile stresses. Zhur.tekh.fiz. 25 no.5:922-932 My '55. (MLRA 8:7)
(Metals--Testing) (Strains and stresses)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929910016-4"

LIKACHEV, Yu.I.

Method for determining the resistance to tearing off of plastic
metals. Zav, lab. 22 no.10;1209-1217 '56. (MLRA 10:5)

1.Kuybyshevskiy industrial'nyy institut im. V.V. Kuybysheva.
(Metals--Testing)

Likhachev, Yu. I.

Category : USSR/Solid State Physics - Mechanical Properties of Crystals and Polycrystalline Compounds E-9

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6775

Author : Likhachev, Yu. I.

Title : On the Causes of Large Plastic Deformations in the Stretching of Metal Samples with Annular Grooves.

Orig Pub : Zh. tekhn. fiziki, 1956, 26, No 8, 1841-1948

Abstract : An investigation of the boundaries of plastic regions constructed as the first approximation of the elastic-solution method on the basis of the Neiber solution, has shown that large plastic deformations appear long before the fracture in the elasto-plastic deformation stage of grooved plastic metal samples (as suggested by Uzhik), because the plastic deformation region penetrates to the axis of the sample on both sides of the smallest groove cross section, and a closed plastic region containing the elasto-deformed nucleus is formed.

Card : 1/1

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18-8200 1500

S/137/60/000/009/014/029
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 9, p. 238,
21432

AUTHOR: Likhachev, Yu.I.

TITLE: On Determining the Tearing Strength of Plastic-Deformed Metal

PERIODICAL: V sb.: Nekotoryye probl. prochnosti tverdogo tela, Moscow-Lenin-
grad, AN SSSR, 1959, pp. 312-324

TEXT: The solution of an elastic-plastic problem is made more precise for a cylindrical specimen with a hyperbolic-profiled circular notch subjected to elongation test. The strained state was determined with taking into account the considerable plastic deformation in loaded state approaching failure. The refined solution accounts for the effect of changes in the notch profile under load on the elastic zone and the elastic changes in the volume in the ductile zone. The precise method was used to investigate in the first approximation the effect on the tearing strength, R_{σ} , of various tempering temperatures for 30X7CA (30KhGSA) steel, temper brittleness of 30X7CHA (30KhGSNA) steel and the C content

Card 1/2

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85763

S/137/60/000/009/014/029
A006/A001

On Determining the Tearing Strength of Plastic-Deformed Metal

in normalized "45" grade and 8 (U8) steels. For 30KhGSA steel $R_{\sigma'}$ varies very little within the tempering temperature range, t_{temp} , 200-400°C; at a higher t_{temp} raised up to 650°C the $R_{\sigma'}$ value decreases considerably. The $R_{\sigma'}/\sigma_s$ ratio is the least (increased danger of brittle failure) at t_{temp} of 400°C, which is connected with phenomena of temper brittleness. The tearing resistance of the ductile variety of 30KhGSNA steel exceeds by 17% and the $R_{\sigma'}/\sigma_s$ value by 11% the tearing resistance of brittle variety. Comparison of results obtained for 45 and U8 grade steels shows that $R_{\sigma'}$ increases with a higher C content, but $R_{\sigma'}/\sigma_s$ decreases, indicating the glowing danger of brittle failure. There are 12 references.

V.C.

Translator's note : This is the full translation of the original Russian abstract.

Industrial and m. Kugyshov, Kugystov.

Card 2/2

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929910016-4

BURMISTROV, A.G.; LIKHACHEV, Yu.I.; MAUMOV, M.G.

Instrument for the investigation of the mechanical properties
of brittle materials in case of comprehensive compression. By:
vys. ucheb. zav.; neft' i gaz 7 ne.12:17-40 '61 (MIR)

L. Kuybyshhevskiy politekhnicheskiy institut im. V. V. Kuibysheva

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929910016-4"

L 01063-66 EPA(s)-2/EMT(m)/EWP(w)/EWA(d)/EFF(n)-2/T/EWP(t)/EWP(b) ES/JD/DM

ACCESSION NR: AP5014539

UR/0089/65/018/005/0483/0487
621.039.542:621.039.548

AUTHOR: Likhachey, Yu. I.; Zyonarev, V. P.; Pupko, V. Ya.

TITLE: Internal stresses due to uneven swelling of fissioning material 33

SOURCE: Atomnaya energiya, v. 18, no. 5, 1965, 483-487 79 B

TOPIC TAGS: fissioning material, reactor fuel element, fuel element swelling, internal stress, macrostress

ABSTRACT: The authors consider a new cause of macrostresses of the first kind in fuel elements, namely uneven swelling of the fissioning material, brought about by the fact that the fission products are not produced at equal rates over the cross section of the fuel element. The resultant stresses are calculated under certain simplifying assumptions, with a fuel element in the form of a long solid cylindrical rod as an example. The joint action of the stresses due to uneven swelling and of the temperature stresses is considered for brittle material, for plastic material with negligible creep (metal at relatively low temperature), and plastic material with appreciable creep (relatively high temperature level). It is shown that the uneven swelling must be taken into account in the strength calculations in the case of brittle material and material with negligible creep. Orig. art.

Card 1/2

L 01063-66

ACCESSION NR: AP5014539

has: 2 figures and 8 formulas.

ASSOCIATION: none

SUBMITTED: 25May64

NR REF Sov: 003

ENCL: 00

OTHER: 004

SUB CODE: NP

Card 2/2 AP

SOROKIN, O.V.; LIKHACHOV, Ya.I.

Method for fast loading of specimens in tensile tests.
Zav.lit. 31 no.3:381-382 '65. (NRA 25:12)

1. Kuybyshevskiy politekhnicheskiy institut.

LIKhachev, Yu. P.

LIKHACHEV, Yu.P.

Lethal complications of liver fluke diseases (some data on patho-morphology and pathogenesis of liver fluke diseases). Sov.med. 21 no.9:118-122 S '57. (MIRA 11:1)

1. Iz patologoanatomiceskogo otdeleniya Salekhardskoy okruzhnoy bol'nitsy Yamalo-Nenetskogo natsional'nogo okruga.
(THERMATODE INFECTIONS
Opistorchosis, pathol. & pathogen.)

LINKACHEV, Yu.P.

Sudden death from postvaccinal encephalitis. Sud.-med. ekspert.
3 no.3:35-38 Jl-8 '60. (MIRA 13:9)

1. Byuro sudebnomeditsinskoy ekspertisy (nachal'nik L.N. Dodina)
Moskovskogo oblastnogo otdela zdravookhraneniya.
(DEATH—CAUSES) (ENCEPHALITIS)
(VACCINATION)

TEODORI, M.I.; LIKHACHEV, Yu.P.

Clinical and pathological aspects of so-called thrombotic
thrombocytopenic purpura. Terap. arkh. 32 no. 3:76-82 Mr '60.
(MIRA 14:1)

(PURPURA (PATHOLOGY))

SHTERN, R.D., kand.med.nauk; ARUTYUNOV, V.D.; LIKHACHEV, Yu.P.

Extensive dissecting aortic aneurysm. Klin.med. 39 no.1:49-54
Ja '61. (MIRA 14:1)
(AORTIC ANEURYSMS)

LIKACHEV, Yu. P. (Moskva)

Case of congenital aneurysms of the cerebral arteries. Arkh. pat.
no. 7:75-78 '61. (MIRA 15:4)

1. Iz patologoanatomicheskogo otdeleniya (nach. R. D. Shtern)
Glavnogo voyennogo gospitalya imeni N. N. Burdenko (nach.
L. I. Lyalin)

(INTRACRANIAL ANEURYSMS)

PYASETSKAYA, A.R.; LIKHACHEV, Yu.P. (Moskva)

Cardiovascular disorders in Marfan's disease. Terap.arkh. no.6:
108-111 '62. (MIRA 15:9)

1. Iz terapeuticheskogo i patologoanatomiceskogo otdeleniy
gorodskoy bol'nitsy No.29 (glavnyy vrach N.G. Orlov).
(ARACHNODACTYLY) (CARDIOVASCULAR SYSTEM--DISEASES)

LIKACHEV, Yu.P.; BONDARCHUK, M.S. [deceased]; SERENKO, A.P. (Moskva)

Myogenic tumors of the duodenum. Klin.med. 40 no.6:112-118 Je
'62. (MIRA 15:9)
(DUODENUM--TUMORS)

LIKHACHEV, Yu.P. (Moskva)

Morphology and pathogenesis of progressive cardiosclerosis.
Kardiologiya 3 no.4 1963 (MIRA 1783)

1. Iz patologoanatomiceskogo otdeleniya (nachal'nik R.D. Shtern) Glavnogo voyennogo gospitalya (nachal'nik L.I. Lyalin), nauchnyy rukovoditel' temy - prof. A.V. Smol'yannikov.

LIKACHEV, Yu.P.; NEMIROVSKAYA, N.A. (Moskva)

Lesions of the spinal cord in radiotherapy. Med. rad. 8 no.4:
27-33 Ap'63 (MIRA 17:2)

1. Iz patologoanatomiceskogo otdeleniya (nachal'nik R.D. Shtern) Glavnogo voyennogo gospitalya imeni N.N.Burdenko i patologosmaticheskogo otdeleniya (zav. - A.P.Serenko) gorodskoy bol'nitsy No.29 imeni Baumana, Moskva.

LIKACHEV, Yu.P. (Moskva)

Transformation of Pautrier-Woringer lipopigmentary reticulosis
into reticulosarcoma. Vest. derm. i ven. 37 no.5:13-16 My '63.
(MIRA 17:5)
1. Patologoanatomiceskoye otdeleniye (nachal'nik R.D. Shtern)
Glavnogo voyennogo gospitalya imeni akademika N.N. Burdenko
(nachal'nik L.I. Lyalin), Moskva.

SHTERN, R.D.; LIKHACHEV, Yu.P. (Moskva)

Endotheliomatosis as a systemic tumorous lesion. Arkh. pat. 25
no.10:35-40 '63. (MIRA 17:7)

1. Iz patologoanatomicheskogo otdeleniya (nachal'nik - kand.
med. nauk R.D. Shtern) Glavnogo voyennogo gospitalya imeni
N.N. Burdenko.

SHAPOSHNIKOV, Yu.G., kand. med. nauk (Moskva, ul. Chaykovskogo, d.18, kv.6);
LIKHACHEV, Yu.P.

Chondromyxoid tumors of the extremities. Vest. khir. 92 no.6:
105-107 Je '64. (MIRA 18:5)

1. Iz Glavnogo voyennogo gospitalya imeni akademika N.N. Burdenko.

LIKACHEV, Yu.P.

Development of anastomoses of the coronary arteries of the heart
with the arteries of the diaphragm following resection of cardiac
aneurysm by the Petrovskii method. Khirurgiia no.10:80-83 '64.
(MIRA 18:8)

1. Patologoanatomiceskoye otdeleniye (nachal'nik R.D.Shtern)
Glavnoe voyennogo gospitalya imeni Burdenko (nachal'nik M.M.
Gilenko), Moskva.

ASHMARIN, Yu.Ya.; LIKHACHEV, Yu.P. (Moskva)

Weber-Christian disease resulting in calcinosis of the subcutaneous tissue. Vest. derm. i ven. 38 no.9:73-75 S '64.

(MIRA 18:4)

1. Kozhnoye (nachal'nik Yu.Ya.Ashmarin) i patologoanatomiceskoye (nachal'nik R.D.Shtern) otdeleniya Glavnogo voyennogo gospitalya imeni Burdenko (nachal'nik M.M.Gilenko), Moskva.

ZANADVOROV, S.; LIKHACHEVA, A.

Pressure cookery. Obshchestv.pit. no.2:42 F '63.
(Pressure cookery) (MFA 16:4)

ATABEKYAN, Ashot Arsenovich; LIKHACHEVA, Anna Alekseyevna; LUPPOV, N.P., red.; IONINA, I.N., vod. red.; YASHCHURZHINSKAYA, A.B., tekhn. red.

[Upper Cretaceous sediments of the western Kopet-Dag] Verkhnemelcovye otlozheniya Zapadnogo Kopet-Daga. Leningrad, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, Leningr. otd-nie, 1961.
241 p. (Leningrad, Vsesoiuznyi geologicheskii institut. Trudy, no.10)
(MIRA 15:6)

1. Rukovoditel' Sredneaziatskoy ekspeditsii Vseoyuznogo nauchno-issledovatel'skogo geologicheskogo instituta (for Lupov).

(Kopet-Dag--Petroleum geology)
(Kopet-Dag--Gas, Natural--Geology)

AYNEMER, A.I.; ZHELUBOVSKAYA, N.Ya.; LIKHACHEVA, A.A.; SAPERSON, E.I.

Stratigraphic division and lithological characteristics of a section of a structural-profile well, drilled at the Cheshme hills (central Lower Kara Kum). Trudy VSEGEI 109:302-319 '63.
(MIRA 17:7)

GFDYK, P.K.; BUKHLITSKIY, A.Z.; LIKHACHEVA, A.A.

It should be exemplary. Standartizatsiya 29 no.9:38-39
S '65. (MIRA 18:12)

1. Chleny sektsii standartizatsii tekhniko-ekonomicheskogo
soveta Sredne-Ural'skogo soveta narodnogo khozyaystva.

LEYBUSH, A.G.; LYUDKOVSKAYA, B.G.; GRUZINTSEVA, A.N.; LIKHACHEVA, A.S.;
YANYKINA, Ye.V.; GOL'DMAN, A.M.

Effect of the thermal treatment of a nickel catalyst on the process
of methane conversion. Khim. prom. no. 2:90-96 F '61. (MIRA 14:4)
(Methane) (Catalysts)

GOLUBCHIKOVA, V.M.; LIKHACHEVA, L.G.; CHERNYSHEV, S.D.; CHERNYSHEV,
A.D.; Prinimala uchastiye SERDITOVA, A.V.; KLEYMAN, B.P.,
red.; KAGANOVA, A.A., red.; MEDRISH, D.M., tekhn. red.

[Cookery] Kulinarika. Pod red. B.P.Kleiman. Moskva, Gos-
torgizdat, 1963. 238 p. (MIRA 16:5)

(Cookery)

SOLECHNIK, N.Ya.; NATKINA, L.N.; KOROMYSLOVA, T.S.; LIKHACHEVA, L.I.

Obtaining compressed laminated wood without binders. Der. prom.
12 no.3:9-11 Mr '63. (MIRA 16:5)

1. Lesotekhnicheskaya akademiya im. S.M.Kirova.
(Wood, Compressed)

SOLECHNIK, N.Ya.; NATKINA, L.N.; KOROMYSLOVA, T.S.; LIKHACHEVA, L.I.

Investigating chemical processes for obtaining lignin plastics
binders. Nauch. trudy LTA no.98:61-68 '62. (MIRA 15:12)
 (Hardboard)
 (Wood, Chemistry)

SOV/123-59-16-64617

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 16, p 136 (USSR)

AUTHORS: Mechkovskaya, T.A., Likhacheva, M.A.

TITLE: Obtaining a Multilayer Galvanic Plating on Steel With Lustrous Copper as Intermediate Layer

PERIODICAL: Sb. Kom-t po korrozii i zashchite metallov. Vses. sov. nauchno-tekhn. o.-v, 1958, Nr 3, 82 - 87

ABSTRACT: A multilayer protective plating with lustrous copper + lustrous nickel + chrome with a total thickness of 45 μ does not require any intermediate polishing and glossing operation, warrants a reliable protection of steel from corrosion under heavy-duty service conditions, and possesses an increased hardness and resistance to wear. Based on the tests the following working scheme of multilayer plating was adopted: degreasing with gasoline; electric degreasing at a temperature of 60°C and a current density of 5 amp/dm² in a solution consisting of: caustic soda - 30 grams/liter, calcined soda - 30 gr/l, trisodiumphosphate - 30 gr/l, soaked at the cathode for 5 minutes and at the anode for 1 minute; washing in hot and cold water; dipping into 2 n. H₂SO₄ during 0.5 - 2 minutes and washing in

Card 1/2

LIKHACHEVA, M.I. (Moscow)

How I practice reading geographical literature. Geog. v shkole
no.4:64-65 Jl-Ag '54. (MIRA 7:8)
(Geography--Study and teaching)

BEREZOVSKAYA, T.P.; Prinimali uchastiye: MOROZOVA, R., student; TASKAYEVA, A.,
student; LIKACHEVA, N., student; RAAB, A., student

Pharmacognosy of Cicuta virosa. Apt. delo 10 no.6:36-42 N-D '61.
(MIRA 15:2)

1. Tomskiy meditsinskiy institut.
(WATER HEMLOCK)

24(6), 18(7)

SOV/139-59-1-7/34

AUTHORS: Tsobkallo, S.O., and Likhaev, N.A.

TITLE: Effect of Annealing after Cold Working on the Elastic Limit and Elastic After-Effect of Phosphor Tin Spring Bronze BrOP 6.5 to 0.15 (Vliyaniye otzhiga posle naklepa na predel uprugosti i uprugoye posledovatviye pruzhinnoy olovyanno-fosforistoy bronzy BrOP 6.5 - 0.15)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 1, pp 44-53 (USSR)

ABSTRACT: The material (specification GOST 5017-49) was made in the form of a spring strip, 0.2 mm thick with three different reductions in area during rolling: (1) 32 ~ 35, (2) 49, and (3) 60%. The heat treatment of the material consisted in annealing the specimens at temperatures in the range 200 to 650 °C for one to four hours. The investigation of elastic after-effect and the measurement of the elastic limit were carried out by a new method (Refs 2, 3, 13) involving bending of specimens, 20 x 110 mm. The modulus of elasticity of the materials was measured by a new infra-sound method (Refs 9, 10, 11) and was found to be (1.13 - 1.17) 10⁴ kg/mm² on transition from cold worked to fully annealed specimens. The elastic limit was measured in accordance with new ideas

Card 1/5

SOV/139..59..1..7/34

Effect of Annealing After Cold Working on the Elastic Limit and
Elastic After-Effect of Phosphor Tin Spring Bronze BrOP 6.5 - .15
as to its dependence on the time of action of a force on
a body (Refs 2, 3, 4). The maximum values for the
elastic limits and their corresponding optimum annealing
temperatures are shown in Table 1. The processes of
direct and reverse elastic after-effect were studied at
stresses close to the elastic limit. The materials used
were those which in the annealed condition exhibited the
greatest elastic limit (Fig 4). Besides, an investiga-
tion of these processes under identical stresses, but
different treatment temperatures, was carried out. For
a satisfactory quantitative estimation of the process of
after-effect the following numerical characteristics
should be introduced: (1) magnitude of deformation of
direct elastic after-effect for ten minutes - $\Delta\varepsilon_{10}$, in
%; (2) difference between the magnitudes of direct
elastic after-effect for two hours and for ten minutes -
 $m = \Delta\varepsilon_{120} - \Delta\varepsilon_{10}\%$; (3) relationship between the
deformation due to direct after-effect for two hours and
that due to direct after-effect for ten minutes -
 $k = \Delta\varepsilon_{120}/\Delta\varepsilon_{10}$; (4) reverse after-effect for one hour -

Card 2/5

SOV/139-59-1-7/3⁴

Effect of Annealing After Cold Working on the Elastic Limit and
Elastic After-Effect of Phosphor Tin Spring Bronze BrOP 6.5 - 0.15

$\Delta\varepsilon_{obr60}\%$; (5) reversibility of the after-effect process $a = \Delta\varepsilon_{obr60}/\Delta\varepsilon_{pri120}\%$. These values are called the criteria of elastic after-effect (see Table 2). In Fig 6 dependence of temporary resistance, elongation at fracture and micro-hardness on the temperature of one hour's annealing for BrOP 6.5 to 0.15, cold worked with different degrees of deformation in the original condition, is shown: (1) 32 - 35% (2) 49% (3) 60% deformation. The authors have arrived at the following conclusions. The elastic limit and the characteristics of incomplete elasticity of polycrystals are determined by the mobility of dislocations and by the path along which they can move. These processes differ from those which cause the characteristics of resistance to great plastic deformations (e.g. hardness), and hence the mechanical properties of spring materials must be estimated first of all according to the elastic limit and elastic after-effect. Annealing of cold worked metals can decrease the elastic after-effect by several times and increase the elastic limit. After annealing

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**Effect of Annealing After Cold Working on the Elastic Limit and
lastic After-Effect of Phosphor Tin Spring Bronze BrOP 6.5 - 0.15**

(relaxation) of cold worked alloys the role of the mechanism of proportional flow in direct elastic after-effect increases, and hence the size of the linear portion in the elastic limit curve becomes longer. The optimum conditions of heat treatment for the bronze BrOP 6.5 - 0.15 are annealing at 350 to 300 °C (depending on the degree of cold work) for one hour. Thereby the direct elastic after-effect decreases by up to five times and the elastic limit increases by 25 to 30%. Besides, the reversibility of elastic after-effect increases, although the absolute value of reverse elastic after-effect decreases. The scatter of the magnitudes of the imperfect elasticity characteristics decreases after annealing. There are many factors which oppose micro-plastic deformation in polycrystalline metals, and lead to a number of processes, having different action times, which bring about deformation by elastic after-effect which can be measured. For the estimation of the characteristics of resistance to great plastic

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SOV/139-59-1-7/3⁴
Effect of Annealing After Cold Working on the Elastic Limit and
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deformations of thin sheet spring materials, it is appropriate to apply micro-hardness tests at relatively great loads (100 g). Such measurements are considerably simpler than those usually applied for testing to fracture, in which temporary resistance and elongation is measured.

Card 5/5 There are 6 figures, 2 tables and 46 references, 29 of which are Soviet, 12 English, 2 German and 3 translations.

ASSOCIATION: Leningradskiy Politekhnicheskiy Institut imeni M.I. Kalinina (Leningrad Polytechnical Institute imeni M.I. Kalinin)

SUBMITTED: August 28, 1958

S/058/61/000/010/073/100
A001/A101

24, 7100

AUTHORS: Likhachev, V.A., Likhacheva, N.A.

TITLE: On microstructural stresses of thermal anisotropy

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 242, abstract 10E87
("Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t", 1960, no.
7, 56 - 67)

TEXT: The authors consider thermo-elastic stresses in a polycrystal caused
by anisotropic thermal expansion of each crystallite. Thermo-elastic stresses
are calculated for a bicrystal hexagonal axes of whose both parts are mutually
perpendicular. The magnitude of stresses is estimated for the arbitrary orienta-
tion of hexagonal axes relative to the interface. Numerical estimates of thermo-
elastic stress values at heating by 1°C are presented for a number of metals.
The authors discuss the possibility of appearance of plastic deformation and
crack formation. KB

N. Pastov

[Abstracter's note: Complete translation]

Card 1/1

34515

S/659/61/007/000/002/044
D217/D303

18. P200

AUTHORS: Likhachev, V.A., and Likhacheva, N.A.

TITLE: Irreversible dimensional changes due to cyclic temperature effects studied from the point of view of the rheology theory

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v.7, 1961, 11 - 19

TEXT: The most probable cause of irreversible dimensional changes is the combined action of stresses arising in components for any reason, and of the influence of temperature. Stresses, whose relaxation lead to the above effect, can arise on heating and cooling as a result of (1) anisotropy of the coefficient of thermal expansion; the stresses arising are balanced in the regions commensurate with the grain size or component size; (2) difference in expansion between neighboring phases; (3) temperature gradient along the cross-section of the specimen and (4) different types of phase transformations accompanied by a change in specific volume of the phases.

Card 1/2

X

Irreversible dimensional changes ...

S/659/61/007/000/002/044
D217/D303

In this paper, the authors attempt a mathematical interpretation, from the point of view of the theory of rheology, of the aforementioned theoretically possible causes of the irreversible changes in dimension and shape as the result of periodic temperature variations. There are 4 figures and 22 references: 14 Soviet-bloc and 8 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: J.E. Burke and A.M. Turkalo, Trans. Amer. Inst. Mining Met. Engrs., 194, 1952; H.H. Chiswick, Trans. Amer. Soc. Met., 49, 48, 1957; J.E. Burke, and A.M. Turkalo, Trans. Amer. Soc. Met., 50, 1958; R. M. Mayfield, Trans. Amer. Soc. Met., 50, 1958.

Card 2/2

X

KARTYSHOV, A.V., inzh.; LIKHACHEVA, N.A., inzh.

Roentgenographic study of 25Kh14G8T steel after a hydraulic
abrasion test. Trudy LIVT no.73:38-42 '64. (MIRA 18:11)

LIKACHEVA, N.B.

Effect of disruption of unity of the premotor zone of the cerebral cortex on arteries of the thyroid gland. Biul. eksp. biol. i med. 40 no.12:59-61 D '55. (MIRA 9:3)

1. Iz kafedry normal'noy anatomii (zav.-prof. M.G. Prives) i Leningradskogo meditsinskogo instituta imeni I.P. Pavlova (dir. dotsent A.I. Ivanov)

(CEREBRAL CORTEX, physiology,
eff. of exper. lesions on arteries of thyroid gland in
cats)

(THYROID GLAND, blood supply,
eff. of exper. lesions of cerebral cortex on arteries in
cats.)

PRIVES, M.G., professor ; LIKHACHEVA, N.B., dotsent

Arteries and veins of the bones. Vest.khir. 75 no.5:8-15 Je '55.
(MLRA 8:10)

1. Iz kafedry normal'noy anatomii (zav.kafedroy prof. M.G. Prives)
1-go Leningradskogo meditsinskogo instituta im. I.P.Pavlova.
(BONES, blood supply
arterial & venous network)

LIKACHEVA, N.B.

USSR/Morphology of Man and Animals - (Normal and Pathologic).
Circulatory System.

S-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 12434

Author : Likacheva, N.B.

Inst :

Title : Age Peculiarities in the Blood Supply to the Pineal Body
of Man.

Orig Pub : Izv. Acad. ped. nauk RSFSR, 1957, vyp. 84, 205-214

Abstract : It was established, by means of fixed preparations and roentgenography of injected specimens, that the pineal body is supplied by the internal carotid and basilar arteries. The course and diameter of the arteries which are outside the organ change with age. These arteries are thin and straight, being 0.08 - 0.1 mm in diameter in embryos and newborn, but the diameter increases insignificantly, reaching 0.15 mm, after the age of 5. A sinuous course on the surface of the gland is noted in

Card 1/2

LIVACHEVA, N.P., Doc Med Sci -- (diss) "Anatomy of the blood vessels of the bronchiogenic group of internal secretion glands." Len, 1958, 15 (First Len Med Inst im Academician I.P. Pavlov. Chair of Normal Anatomy) 200 copies (KL, 27-18, 115)

- 181 -

LIKACHEVA, Nataliya Borisovna; PRIVES, M.G., red.

[Some peculiarities in the anatomy of the blood vessels of
the branchiogenic group of glands of internal secretion]
Nekotorye osobennosti anatomii krovenosnykh sosudov brankhio-
gennoi gruppy zhelez vnutrennei sekretsii. Leningrad, Medgiz,
1958. 79 p.
(ENDOCRINE GLANDS--BLOOD SUPPLY)

(MIRA 13:9)

LIKHACHEVA, N.B. (Leningrad, 24, 3-ua Sovetskaya ul., 21, kv. 17)

Effect of removal of the superior cervical sympathetic ganglion
on the thyroid gland artery. Arkh.anat.gist.i embr. 39 no.7:63-68
(MIRA 14:5)
Jl '60.

1. Kafedra normal'noy anatomii (zav. - prof. M.G.Prives) I Lenin-
gradskogo meditsinskogo instituta imeni I.P.Pavlova.
(THYROID GLAND—BLOOD SUPPLY)
(NERVOUS SYSTEM, SYMPATHETIC—SURGERY)

PRIVES, M.G.; LIKHACHEVA, N.B.

Significance of F. Engel's theory of work for the study of vascular anatomy of organs; data on evolutionary anatomy of the vascular system. Arkh. anat. i embr. 41 no.11:30-41 N '61. (MIRA 14:12)

1. Kafedra normal'noy anatomi (zav. - prof. M.G.Prives) I Leningradskogo meditsinskogo instituta imeni akademika Pavlova.
(BLOOD VESSELS) (ANATOMY, COMPARATIVE)